**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1. Product identifier**
Product form: Mixture  
Product name: Metal Primer

**1.2. Relevant identified uses of the substance or mixture and uses advised against**
Use of the substance/mixture: For professional use only.

**1.3. Details of the supplier of the safety data sheet**
Manufacturer: Reliance Orthodontic Products Inc. 1540 West Thorndale Ave. Itasca, IL 60143 USA  
630-773-4009, during normal business hours

**1.4. Emergency telephone number**
Emergency number: 1-703-527-3887

**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**
Classification (GHS-US):
- Flam. Liq. 2 H225
- Skin Irrit. 2 H315
- Skin Sens. 1 H317
- STOT SE 3 H335
- Aquatic Acute 3 H402

Full text of H-phrases: see section 16

**2.2. Label elements**
GHS-US labeling:
- Hazard pictograms (GHS-US):
  - GHS02
  - GHS07

Signal word (GHS-US): Warning
Hazard statements (GHS-US):
- H225 - Highly flammable liquid and vapor
- H315 - Causes skin irritation
- H317 - May cause an allergic skin reaction
- H335 - May cause respiratory irritation
- H402 - Harmful to aquatic life

Precautionary statements (GHS-US):
- P333+P313 - If skin irritation or rash occurs: Get medical advice/attention
- P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
- P233 - Keep container tightly closed
- P264 - Wash hands thoroughly after handling
- P332+P313 - If skin irritation occurs: Get medical advice/attention
- P403+P235 - Store in a well-ventilated place. Keep cool
- P501 - Dispose in a safe manner in accordance with local/national regulations.

**2.3. Other hazards**
No additional information available

**2.4. Unknown acute toxicity (GHS-US)**
Not applicable

**SECTION 3: Composition/information on ingredients**

**3.1. Substance**
Not applicable
3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>methylmethacrylate, monomer, inhibited</td>
<td>(CAS No) 80-62-6</td>
<td>&gt;= 85</td>
<td>Flam. Liq. 2, H225                          Skin Irrit. 2, H315                        Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Acute 3, H402</td>
</tr>
<tr>
<td>4-Methacryloxyethyl Trimellitic</td>
<td>(CAS No) 70293-55-9</td>
<td>1 - 5</td>
<td>Skin Irrit. 2, H315                          Eye Irrit. 2A, H319 STOT SE 3, H335</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor/physician if you feel unwell.

First-aid measures after skin contact: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention. Specific treatment (see First aid measures on this label). If skin irritation or rash occurs:

First-aid measures after eye contact: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.

First-aid measures after ingestion: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation: May cause an allergic skin reaction. May cause respiratory irritation.

Symptoms/injuries after skin contact: Causes skin irritation.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media


Unsuitable extinguishing media: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard: Highly flammable liquid and vapor.

Explosion hazard: May form flammable/explosive vapor-air mixture.

5.3. Advice for firefighters

Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.

6.1.1. For non-emergency personnel

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment: Equip cleanup crew with proper protection.

Emergency procedures: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.
6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.
Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No naked lights. No smoking. Use only non-sparking tools. Avoid breathing mist, vapors. Use only outdoors or in a well-ventilated area.

Hygiene measures : Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed.
Storage conditions : Keep in fireproof place. Keep container tightly closed.
Incompatible products : Strong bases. strong acids.
Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Substance</th>
<th>ACGIH TWA (ppm)</th>
<th>ACGIH STEL (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal Primer</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>methylmethacrylate, monomer, inhibited (80-62-6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACGIH</td>
<td></td>
<td>50 ppm</td>
</tr>
<tr>
<td>OSHA</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>4-Methacryloxyethyl Trimellitic (70293-55-9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACGIH</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>OSHA</td>
<td>Not applicable</td>
<td></td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure.
Hand protection : Wear protective gloves.
Eye protection : Chemical goggles or safety glasses.
Skin and body protection : Wear suitable protective clothing.
Respiratory protection : Wear approved mask.
Other information : When using, do not eat, drink or smoke.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Light yellow.</td>
</tr>
<tr>
<td>Odor</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Metal Primer
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Water: Solubility in water of component(s) of the mixture: 1.5 g/100ml</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

**9.2. Other information**

No additional information available

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

No additional information available

**10.2. Chemical stability**

Highly flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

**10.3. Possibility of hazardous reactions**

Not established.

**10.4. Conditions to avoid**

Direct sunlight. Extremely high or low temperatures. Open flame.

**10.5. Incompatible materials**

strong acids. Strong bases.

**10.6. Hazardous decomposition products**


**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

Acute toxicity : Not classified

**methylmethacrylate, monomer, inhibited (80-62-6)**

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 6000 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; 7900 mg/kg bodyweight; Rat; Equivalent or similar to OECD 401; Weight of evidence; 8400 mg/kg bodyweight; Rat; Weight of evidence)</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>&gt; 7550 mg/kg (Rabbit; Literature study; Equivalent or similar to OECD 402; &gt;5000 mg/kg bodyweight; Rabbit; Experimental value)</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>27.5 mg/l/4h (Rat; Literature study)</td>
</tr>
<tr>
<td>ATE US (vapors)</td>
<td>27.500 mg/l/4h</td>
</tr>
<tr>
<td>ATE US (dust, mist)</td>
<td>27.500 mg/l/4h</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

**methylmethacrylate, monomer, inhibited (80-62-6)**

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC group</td>
<td>3 - Not Classifiable</td>
</tr>
</tbody>
</table>
### 4-Methacryloxyethyl Trimellitic (70293-55-9)

<table>
<thead>
<tr>
<th>IARC group</th>
<th>4 - Probably Not Carcinogenic</th>
</tr>
</thead>
</table>

**Reproductive toxicity**

: Not classified

**Specific target organ toxicity (single exposure)**

: May cause respiratory irritation.

**Specific target organ toxicity (repeated exposure)**

: Not classified

**Aspiration hazard**

: Not classified

**Potential Adverse human health effects and symptoms**

: Based on available data, the classification criteria are not met.

**Symptoms/injuries after inhalation**

: May cause an allergic skin reaction. May cause respiratory irritation.

**Symptoms/injuries after skin contact**

: Causes skin irritation.

### SECTION 12: Ecological information

#### 12.1. Toxicity

<table>
<thead>
<tr>
<th>ecology - water</th>
<th>Harmful to aquatic life.</th>
</tr>
</thead>
</table>

**methylmethacrylate, monomer, inhibited (80-62-6)**

<table>
<thead>
<tr>
<th>LC50 fish 1</th>
<th>130 mg/l (96 h; Pimephales promelas; Lethal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC50 Daphnia 1</td>
<td>69 mg/l (48 h; Daphnia magna; GLP)</td>
</tr>
<tr>
<td>LC50 fish 2</td>
<td>191 mg/l (96 h; Lepomis macrochirus)</td>
</tr>
<tr>
<td>EC50 Daphnia 2</td>
<td>502 mg/l (24 h; Daphnia magna)</td>
</tr>
<tr>
<td>TLM fish 1</td>
<td>159 mg/l (96 h; Pimephales promelas)</td>
</tr>
<tr>
<td>Threshold limit other aquatic organisms 1</td>
<td>100 mg/l (16 h; Pseudomonas putida)</td>
</tr>
<tr>
<td>Threshold limit algae 1</td>
<td>37 mg/l (168 h; Scenedesmus quadricauda; Toxicity test)</td>
</tr>
<tr>
<td>Threshold limit algae 2</td>
<td>120 mg/l (192 h; Microcystis aeruginosa)</td>
</tr>
</tbody>
</table>

#### 12.2. Persistence and degradability

**methylmethacrylate, monomer, inhibited (80-62-6)**

<table>
<thead>
<tr>
<th>Persistence and degradability</th>
<th>Readily biodegradable in water. No (test)data on mobility of the substance available. Photolysis in the air.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biochemical oxygen demand (BOD)</td>
<td>0.14 g O₂/g substance</td>
</tr>
<tr>
<td>ThOD</td>
<td>1.9 g O₂/g substance</td>
</tr>
<tr>
<td>BOD (% of ThOD)</td>
<td>0.073 % ThOD</td>
</tr>
</tbody>
</table>

#### 12.3. Bioaccumulative potential

**methylmethacrylate, monomer, inhibited (80-62-6)**

<table>
<thead>
<tr>
<th>BCF fish 1</th>
<th>2.97 - 3.5 (Pisces)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Pow</td>
<td>1.32 - 1.38 (Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method; 20 °C)</td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
<td>Low potential for bioaccumulation (Log Kow &lt; 4).</td>
</tr>
</tbody>
</table>

#### 12.4. Mobility in soil

**methylmethacrylate, monomer, inhibited (80-62-6)**

<table>
<thead>
<tr>
<th>Surface tension</th>
<th>0.028 N/m (20 °C)</th>
</tr>
</thead>
</table>

#### 12.5. Other adverse effects

**Effect on ozone layer**

: 

**Effect on the global warming**

: No known ecological damage caused by this product.

**Other information**

: Avoid release to the environment.
SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations: Dispose in a safe manner in accordance with local/national regulations. Dispose in a safe manner in accordance with local/national regulations.

Additional information: Handle empty containers with care because residual vapors are flammable.

Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT

Transport document description: UN1247 Methyl methacrylate monomer, stabilized, 3, II
UN-No.(DOT): UN1247
Proper Shipping Name (DOT) Hazard Classes: Methyl methacrylate monomer, stabilized
Department of Transportation (DOT) Hazard Classes: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Hazard labels (DOT): 3 - Flammable liquid

Packing group (DOT): II - Medium Danger
DOT Special Provisions (49 CFR 172.102): IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50°C (1.1 bar at 122°F), or 130 kPa at 55°C (1.3 bar at 131°F) are authorized.
T4 - 2.65 178.274(d)(2) Normal.................. 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

DOT Packaging Exceptions (49 CFR 173.xxx): 150
DOT Packaging Non Bulk (49 CFR 173.xxx): 202
DOT Packaging Bulk (49 CFR 173.xxx): 242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27): 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75): 60 L
DOT Vessel Stowage Location: B - (i) The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) “On deck only” on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
DOT Vessel Stowage Other: 40 - Stow “clear of living quarters”

Additional information

Other information: No supplementary information available.

ADR

Transport document description: UN 1247, 3, II, (D/E)
Packing group (ADR): II
Class (ADR): 3 - Flammable liquid
Hazard identification number (Kemler No.): 339
Classification code (ADR): F1
Danger labels (ADR): 3 - Flammable liquids
Metal Primer
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Orange plates : 339
Tunnel restriction code (ADR) : D/E
LQ : 1L
Excepted quantities (ADR) : E2

Transport by sea
No additional information available

Air transport
UN-No.(IATA) : 1247
Class (IATA) : 3 - Flammable Liquids

SECTION 15: Regulatory information

15.1. US Federal regulations
No additional information available

15.2. International regulations
CANADA
No additional information available

4-Methacryloxyethyl Trimellitic (70293-55-9)
WHMIS Classification | Class D Division 2 Subdivision B - Toxic material causing other toxic effects

EU-Regulations
No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Flam. Liq. 2 H225
Skin Irrit. 2 H315
Skin Sens. 1 H317
STOT SE 3 H335
Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

15.2.2. National regulations

15.3. US State regulations

SECTION 16: Other information

Other information : None.

Full text of H-phrases:
- Aquatic Acute 3 Hazardous to the aquatic environment - Acute Hazard Category 3
- Eye Irrit. 2A Serious eye damage/eye irritation Category 2A
- Flam. Liq. 2 Flammable liquids Category 2
- Skin Irrit. 2 Skin corrosion/irritation Category 2
- Skin Sens. 1 Skin sensitization Category 1
- STOT SE 3 Specific target organ toxicity (single exposure) Category 3
- H225 Highly flammable liquid and vapor
- H315 Causes skin irritation
- H317 May cause an allergic skin reaction
- H319 Causes serious eye irritation
- H335 May cause respiratory irritation
- H402 Harmful to aquatic life

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.